

EUROPEAN PATENT OFFICE

Patent Abstracts of Japan

PUBLICATION NUMBER : 06211890
 PUBLICATION DATE : 02-08-94

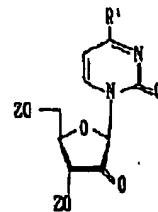
APPLICATION DATE : 12-01-93
 APPLICATION NUMBER : 05003532

APPLICANT : YOSHITOMI PHARMACEUT IND LTD;

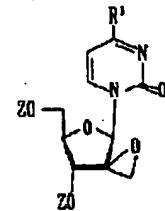
INVENTOR : MATSUDA AKIRA;

INT.CL. : C07H 19/06 A61K 31/70 C07H 19/10

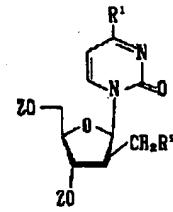
TITLE : 2'-DEOXY-2'-(3754/24)S)-SUBSTITUTED
 ALKYL CYTIDINE DERIVATIVE



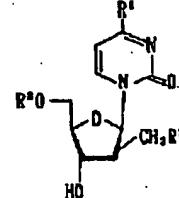
I



II



III



IV

ABSTRACT : PURPOSE: To obtain the subject derivative consisting of a 2'-deoxy-2'-(S)- substituted alkylcytidine derivative, having a cell growth-inhibiting activity, expressing an excellent antitumor activity, useful for the therapy of the malignant tumors of mammalians, etc., and used as an antitumor agent, etc.

CONSTITUTION: The objective derivative of formula IV (R^3 is H, phosphate salt group) is obtained as follows: epoxidizing the 2'-position of the saccharide part of a compound of formula I (R^1 is OH, amino; Z is protecting group) with a sulfur ylide (e.g. trimethylsulfoxonium iodide), opening the 2'-epoxy ring of the saccharide part of the produced spiro epoxy derivative of formula II with a nucleophilic reagent (e.g. potassium fluoride), acylating the produced 2'-OH group with an acylating agent (e.g. methyloxazolyl chloride), reducing the acylated compound with a reducing agent (e.g. tri n-butyl tin hydride), aminating the 4-basic part of the reduced compound of formula III (R^2 is OH, acyloxy, halogen), removing the protecting group of the saccharide part, and finally phosphating the 5-position of the saccharide part.

COPYRIGHT: (C)1994,JPO&Japio